

OILDRAULIC
(R)
ELEVATORS

The elevator that's PUSHED up . . . not pulled up



ROTARY LIFT COMPANY, MEMPHIS, TENNESSEE • CATALOG RE-303

LOUISIANA ELEVATOR CORP.

NEW ORLEANS 12, LA.

PHONE: CAnal 5649

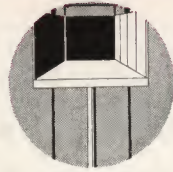
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An Oildraulic Elevator Gives You These Important Advantages



No costly, unsightly penthouse

Because it's pushed up from below, not pulled from above, the Oildraulic Elevator requires no unsightly penthouse. This permits a saving of several hundred to thousands of dollars, and improves the design of a building.



Lighter shaftway structure

There's no need for heavy, load-bearing sidewall supporting columns and footings to carry the car, counterweight, overhead machine, and the load. Rotary's Oildraulic jack supports the entire system from below.



No special machine room

A machine room can usually be dispensed with because Rotary's compact power unit can be located at any convenient spot on any landing and on any side of the hatchway . . . under a stairway, in a closet or basement.



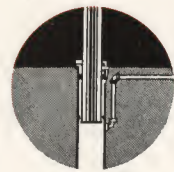
Smooth starts and stops

Even large Oildraulic Elevators in freight service start and stop "as smooth as silk" because of the automatic unloading valve in the famous Oildraulic Controller. No jarring starts and stops to strain the elevator system.



Accurate landing stops

Remarkable landing accuracy is obtained (we guarantee within 1/4 inch plus or minus at landings) by such features as automatic floor leveling which is only one of the important functions of Rotary's Oildraulic Controller.



Low Maintenance Cost

As the pump, all valves and plunger operate in oil at all times, wear is negligible. Motor is used only when car rises—half the usual service. Smooth operation reduces shock and wear. No cables to replace periodically.



■ Engineers, architects and owners are quick to appreciate the definite advantages of Oildraulic Elevators. Competing with other leading types of elevators, Oildraulics are being chosen for 2, 3 and 4 story buildings throughout the country. Photo at left shows two 60,000 lb. capacity Oildraulic Elevators in the Van Iderstine plant, Long Island City, N. Y. Visible in the picture are the powerful oil hydraulic jacks which lift the elevator cars so smoothly.

It's The Most Practical Elevator For Heavy-Duty Service

FOR 2, 3, OR 4 STORIES

Rotary Oildraulic Elevators are ideally suited for extremely heavy-duty applications because of their basic operating principle — that of fluid under pressure. Whether the load is little or great, it is moved with the same efficiency. Power is applied directly to the load, not consumed in gears, cables and sheaves. Our engineers have fully utilized this inherent advantage over a period of years by perfecting jack, pump, valves and control equipment to give outstanding performance.

Rigidity is another advantage. The car will not move downward as heavy loads are rolled into it because it is firmly supported on a solid column of oil. There are no cables to stretch, nothing "to give."

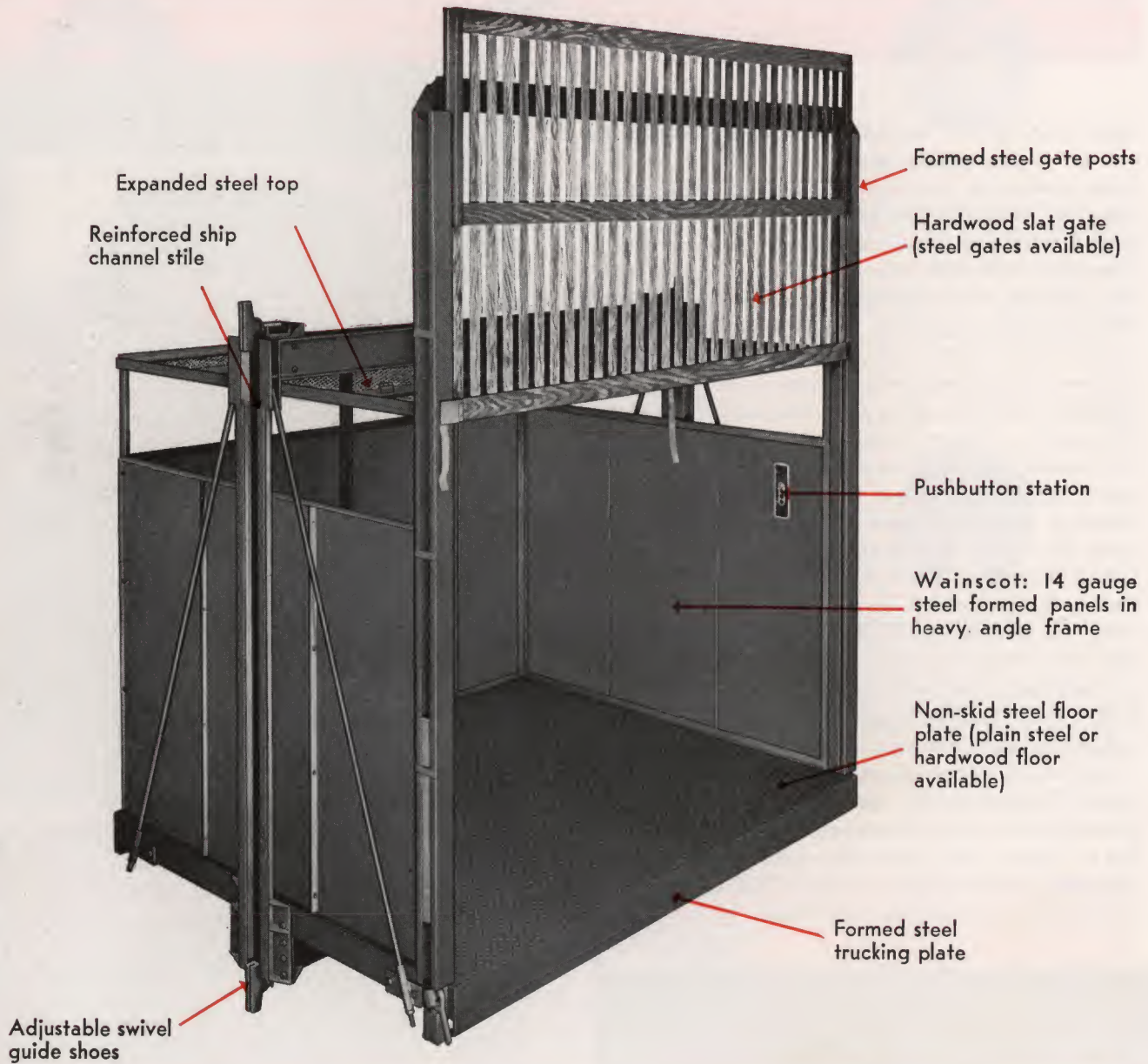
Rotary's automatic floor leveling accurately positions the car to each landing—a "must" for power vehicle handling. Exact floor stops minimize shock during loading; there are none of the jolts caused when the elevator car is above or below the landing. Not only is Rotary leveling extremely accurate; it is less expensive than other types.

Power truck loading is provided for on all Oildraulic freight elevator cars with a capacity of 3,000 pounds or more. They are designed for use with fork lift trucks, tractors, etc., even when service is not planned at the time of purchase. This is done because the purchaser may start using such equipment later. The photo below shows a recent Oildraulic Elevator installation in a modern warehouse.





Rugged Car Construction For Freight Service



Strength and beauty are the outstanding features of Rotary car design. All-steel cars are featured because of the great rigidity and strength obtained through the extensive use of formed (not stock) shapes and electric welding. Non-skid steel flooring is recommended for industrial uses, particularly when powered material handling equipment is used.

Plain steel floor plate and hardwood flooring, needed for certain other applications, are available. **Hardwood slat car gates** are laterally equalized and counterweighted, permitting effortless handling from any position. Offset guide posts allow full car opening width. Screwed and bolted construction—an easy operating gate, a gate that can take it!



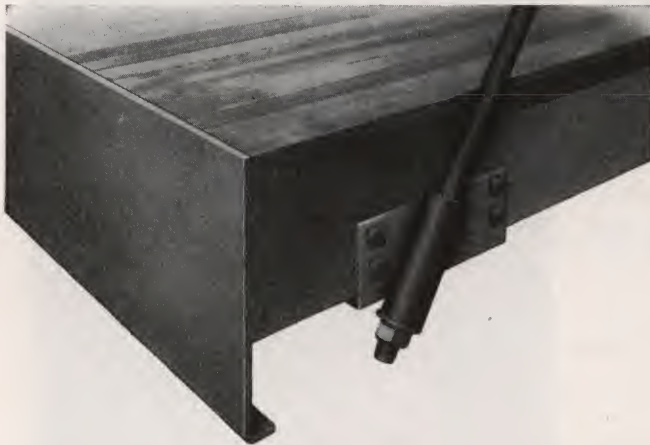
Swivel guide shoes made of tough malleable iron — self-aligning.

Members Are Deep-Formed Electrically Welded



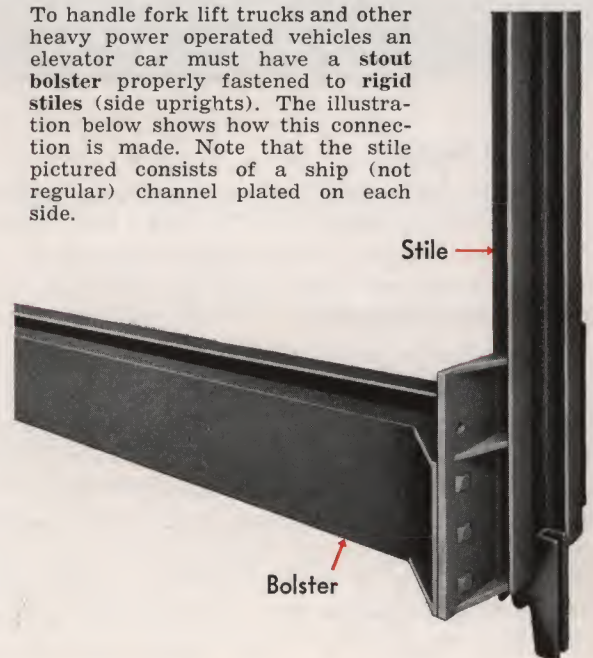
Deep formed members, electrically welded, are one of the big reasons for Rotary's reputation for superior elevator car design. Just as important is the fact that every car is accurately engineered to do the job for which it is ordered, whether that be simple hand trucking or handling 60,000 lb. loads

and power truck loading. This effects a substantial weight saving with no sacrifice of strength. Dead weight requiring unnecessary horsepower is eliminated. Working stresses are in accordance with accepted building codes. The picture above shows the deep front section of a car with formed joists.



Adjustable brace rods (above) permit accurate alignment in the field and adjustment as the need arises later. **Hardwood Flooring** is used in car pictured above. Diagonally laid pine subfloor adds stiffness and prevents skewing of platform.

To handle fork lift trucks and other heavy power operated vehicles an elevator car must have a **stout bolster** properly fastened to **rigid stiles** (side uprights). The illustration below shows how this connection is made. Note that the stile pictured consists of a ship (not regular) channel plated on each side.





Oilraulic Elevators perform beautifully in passenger service for 2, 3 or 4-story commercial buildings, apartments, clinics and other similar structures. Users appreciate two outstanding features: extremely accurate floor stops and smooth operation. Speeds through 100 feet per minute usually suffice for these shorter travel units. Full automatic control with automatic doors, or other combinations of control, are available.

Cabs And Doors.

Elaborately decorated metal or wood cabs and doors are not manufactured by Rotary Lift Co., but a wide selection is available to you through our distributor organization. They have a choice of handsome units made by specialists in the cab and door manufacturing field.

Rotary Standard Cab No. EP-127.

Our company does make a simple, serviceable cab as illustrated on the right. It is not a fancy unit but completely meets the requirements of economy-minded purchasers. Formed panel steel wainscot runs to the top of the 7 ft. headroom car. The interior is painted in the field to match your building color scheme. Flooring is of linoleum or rubber tile in various designs. The bronze car gate is of the collapsible type. Exit is provided in the car top to meet safety and code requirements.

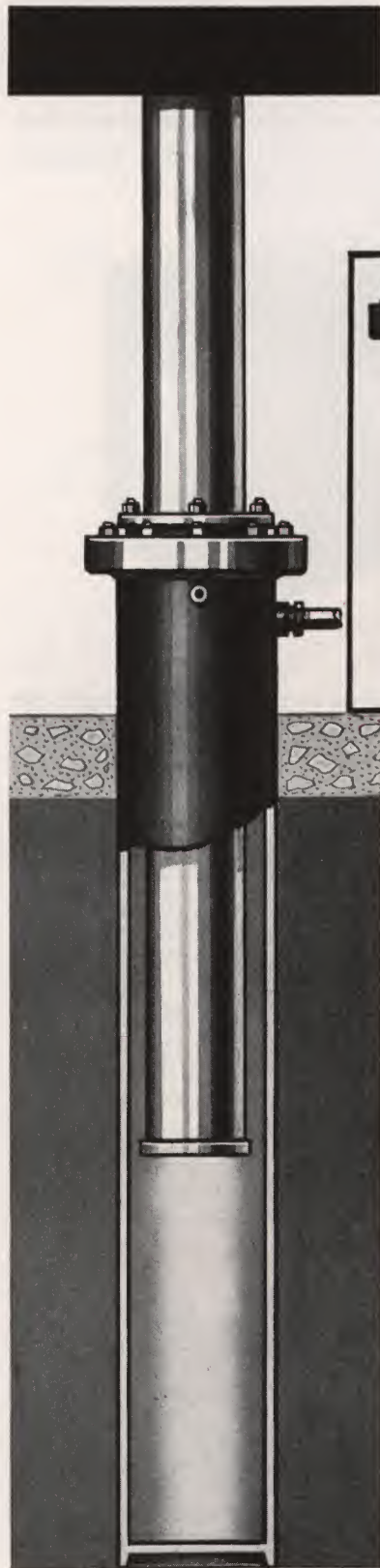


STANDARD PASSENGER CAB
No. EP-127

Powerful Oildraulic Jack

Rotary

**45,000 UNITS ALREADY IN SERVICE
IN ALL PARTS OF THE WORLD ASSURE
SUCCESSFUL PERFORMANCE**



Packing Gland—Made of tough malleable iron, not brittle cast iron. Gland does not contact Plunger.

Drip Pan—Collects any slight oil leakage, which can then be drained off.

Packing—Time-tested self-adjusting chevron type prevents leakage under widely variable load conditions.

Bearing—Babbitt-lined steel bearing is used to reduce friction and prevent scoring of the polished steel plunger. Outwears other bearings 2 to 1.

Plunger—Accurately turned and polished seamless steel tubing. Stop plate at bottom positively prevents plunger from leaving casing.

Outer Casing—Thick-walled steel tubing with a safety factor of many times possible system pressure.

TESTED UNDER MOST SEVERE CONDITIONS

Rotary's wealth of experience gained in building many thousands of oil-hydraulic jacks enables us to furnish you a unit as trouble-free as any mechanism can be. Rotary jacks have been serving faithfully under far more severe conditions than ever encountered in elevator service. Our auto lifts operate in Alaska, South Africa, and other countries with extreme temperatures. Used out in the weather, in severe car washing service, handling heavy trucks, and in other ways that give the jack assembly a terrific beating. They give dependable service year after year with practically no maintenance.

BACKED BY ROTARY EXPERIENCE

Oildraulic jacks are completely fabricated, tested and fully guaranteed by the oldest established oil-hydraulic lift organization operating in the largest and best equipped plant of its type in the world. Rotary's large resources . . . quantity buying of "specification" material . . . specialized equipment for volume production . . . skilled factory personnel . . . completely equipped Research and Engineering Department . . . these are a few of the factors that enable us to produce equipment of undeviating fine quality at unusually attractive prices.



Trouble-Free Power Units

Rotary Power Units have made elevator history during the past 15 years by their smooth, accurate, dependable operation. Their remarkable performance has been proved by such installations as the six tremendous elevators for handling coaches in the Airlines Terminal in New York City.

These machines are manufactured in our own

plant. They are not assembled from a conglomeration of valves and parts "borrowed" from the plumbing field. Our pumps and Oildraulic Controllers were specifically designed for elevator service. Years of research and experience has brought about their perfection. They are recognized as "tops" by buyers who know oil-hydraulic elevators.

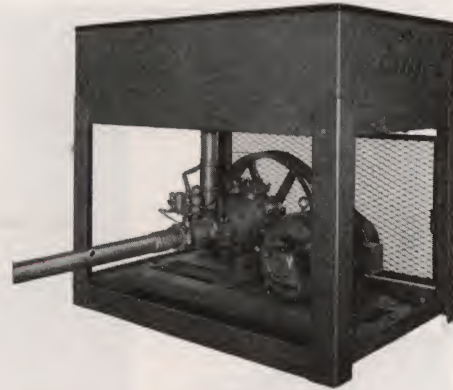


ROTA-GEAR POWER UNITS (Thru 7 1/2 h.p.)

These extremely compact machines (base only 24" x 30") were developed to power the popular smaller size elevators. Large production effects economies resulting in low cost without sacrifice of superior operating features.

The heavy-duty helical gear pump has only two moving parts operating in a bath of oil at all times. The pump speed is only 1750 R.P.M. in comparison with the usual 3400 R.P.M. Noise and wear are reduced to a minimum. Both hydraulic and electric overload protection is furnished. Pump is mounted on end plate of and directly connected to a drip-proof type motor.

The entire operating assembly (motor, pump and Oildraulic Controller) is mounted on a steel sub-frame (see above) which floats on a vibration absorbing mounting. The attractive weather-proof case makes the unit very desirable for certain uses.



ROTA-RADIAL POWER UNITS (10 thru 75 h.p.)

These machines are used to power large freight elevators and can be furnished to handle loads up to 80,000 lbs. and to operate cars at speeds up to 125 F.P.M. Equipped with seven (or nine) cylinder radial pumps and governed by the Oildraulic Controller, they are incomparable in power, smoothness and response to controls. To the best of our knowledge, these pumps were the first ever to be designed specifically for elevator service. Their remarkable overall efficiency makes it possible to obtain superior performance with smaller motors.

The entire motor, pump and Oildraulic Controller assembly is positioned on a rigid steel sub-base which floats on a vibration-absorbing mounting. All components of Rotary power units, including electric control panel at end of oil reservoir, are built into a single enclosure. A protective steel mesh belt guard is furnished as standard on the drive side. Other sides can also be enclosed when specified.

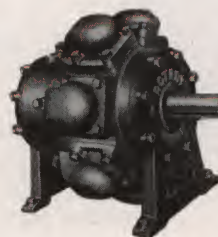
THE OILDRAULIC SILENCER



Quiet operation is essential on all passenger installations and is desirable for many freight elevators. The Oildraulic Silencer does a remarkable job of reducing hatchway noises created by hydraulic impulses common

to all types of pumps. The compact unit is installed on the output side of the power unit and is quite inexpensive. Unlike rubber hoses sometimes used in an attempt to achieve the same results, our unit is blow-out proof, and requires little or no attention.

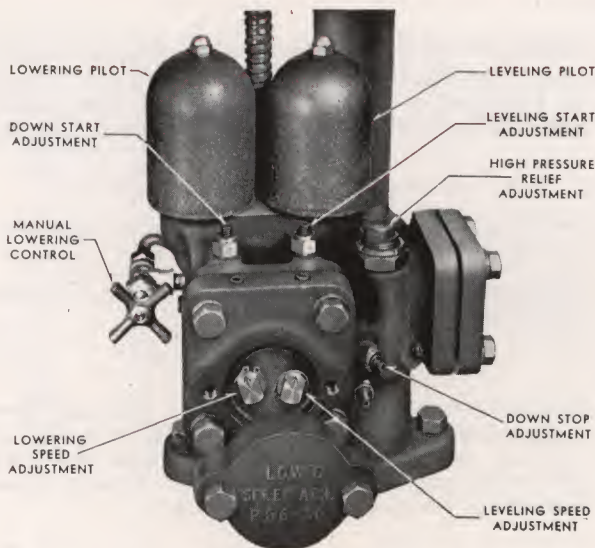
THE ROTA-RADIAL PUMP



This pump gives efficient, positive elevator operation. Its cylinders are arranged in a circle similar to an aircraft engine, and pistons are driven by an eccentric. All parts operate in a circulating bath of oil . . . anti-friction bearings are used throughout . . . oil flow is controlled by a single full floating ported valve . . . the pump is packless with one oil seal on low-pressure side. Slow R. P. M. gives long service, low maintenance.

Magic Oildraulic Controller

Rotary



The Oildraulic Controller is the hydraulic "brains" of an Oildraulic Elevator. It is the remarkable device which carries out the "instructions" of the electric controller which is actuated by the car and landing control buttons. In this device are combined the functions of these 7 separate valves:

- (1) An automatic smooth starting valve (Rota-Relief)
- (2) A high-pressure relief valve
- (3) Main lowering valve
- (4) Manual lowering valve
- (5) Automatic floor leveling valve (when ordered)
- (6) Automatic stopping valve (on certain larger units)
- (7) Check valve

The picture of the Oildraulic Controller above shows the almost complete lack of external piping, despite the number of valve functions involved. This reduction of piping obviously reduces the possibilities of leakage to a minimum.

WHAT THE OILDRAULIC CONTROLLER DOES THAT NO OTHER DEVICE CAN DO

Liquid Smooth UP Starts—The Rota-Relief function of the Controller allows the oil to by-pass when the pump starts. A split second later the oil is automatically and smoothly diverted to the jack, causing the elevator to start with liquid smoothness. Only Rotary's Oildraulic Controller provides such smooth starts. Air chambers, still used by some manufacturers, were discarded by Rotary over twelve years ago because the air constantly needs manual replacement and creates a bouncing action that prohibits consistently accurate floor stops.

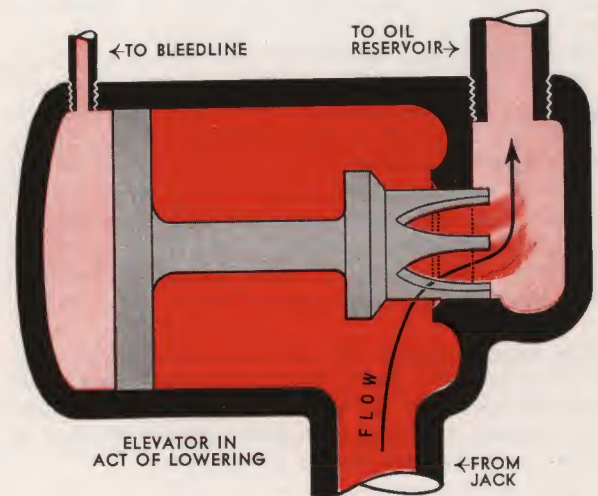
Automatic Leveling—When Rotary introduced automatic floor leveling for oil-hydraulics many years ago, it was an immediate success because it provided so much at such a low cost. With it we can guarantee a plus or minus floor accuracy of $\frac{1}{4}$ " at any speed! Elevator service is speeded up considerably because gates or doors can be opened as the car is in the act of leveling.

Hydraulic Overload Protection—Rotary's Pilot-operated high pressure relief valve in the Oildraulic Controller operates on a close margin of pressure between fully closed and fully open position. It can be set to by-pass fully if capacity is exceeded and the car will not move. The virtue of such a close operating margin is that the car will either run or not run; it will not operate at partial speed when overloaded as with usual type relief valves.

Manual Lowering—This feature is provided so the elevator can be manually lowered in case of power failure by simply turning a handle on the Oildraulic Controller. Mechanics also find it useful when installing or adjusting the system.

HOW IT WORKS

The Oildraulic Controller operates by creating controlled differentials of pressure. Sounds complicated, doesn't it? The colored diagram below shows in a



simple way what this means in terms of the lowering function only. When the car is standing at an upper landing it is resting on a solid "locked" column of oil extending from the jack through to the controller. When any DOWN button is pressed (with all gates and doors closed) an electrical impulse opens a small bleed-line through an electric pilot valve. Then reduced pressure back of the lowering piston (pink area) permits the higher pressure (red area) to open the lowering valve. The car starts downward with liquid smoothness because the valve is hydraulically opened and the liquid flows through tapered port areas. When the reverse situation is created the valve closes again, smoothly.

Electric Control Systems



All Rotary electric controllers are compactly made and **completely enclosed within the power unit case**. Contact points are of the new arc-resisting silver alloy type which require no dressing down (filing) during their useful life. Thermal overload protection is, of course, standard equipment.

Resistance starting is not required with Rotary power units, except to meet power company requirements, because the Rota-Relief function of the Oildraulic Controller starts the elevator over a timed interval more smoothly than a multi-stage starter.

Constant Pressure Push Button Control—This control is quite popular for economy reasons—both power unit and hatchway wiring costs are reduced. With this control an operating button is held in throughout the movement of the car which travels in the direction chosen until the button is released or until a terminal landing has been reached. This system gives the car station preference over landing buttons by means of a non-interference relay which disconnects all landing buttons until a gate or door has been opened and closed.

Momentary Pressure Control—This system is sometimes called "full automatic pushbutton control" because the momentary pressure of a control button moves the car to the landing selected where it stops automatically. A time delay feature prevents the cars being "stolen" while in service. The car station has precedence over all landing stations for a timed interval after doors are closed.

Other Types Control—Car switch control and other types are available. Such features as "in-use" light, "call" bell, provisions for automatic doors and other features are provided at extra costs. Hand cable control is no longer available with Rotary Oildraulics.

Automatic Floor Leveling is standard on all momentary pushbutton jobs. We highly recommend its use also when constant pressure or car switch control is specified as it provides extremely accurate (1/4" plus or minus) automatic floor stops at a low cost.

Automatic Releveling—This feature is required by some local codes and is available at extra cost. It will automatically return a car to the landing if for any reason it settles downward.

Engineering Service—Our associate companies and our Engineering Department, are at your service to help you solve unusual problems. Be sure to make full use of this service.

General Recommendations

Certain recommendations have already been made under specific headings. These suggestions should be followed to assure the greatest "use value" and the longest life from your elevator equipment.

Car Flooring

We strongly recommend the use of non-skid steel decking for freight and sidewalk elevator cars.

Hardwood or plain steel flooring are useful in certain applications.

Speed

Everyone knows that speed is relative. Although speeds of from 150 FPM upward are called for on higher rise elevators, such speeds are not practical on short hauls and entail unnecessary expense. The following speed suggestions are based on sound practice:

For Single Story Travel (Average Rise of 14 Ft.)

Up to 5000 lbs. capacity	25 to 50 FPM UP 40 to 70 FPM DOWN
Over 5,000 lbs. capacity	20 to 40 FPM UP 30 to 60 FPM DOWN

When high capacities are encountered the speed is frequently scaled down for economy reasons.

For 2, 3, or 4 Story Travel

Greater speeds should be specified for these travels. A good yardstick to use is that the upward travel should never exceed one minute between terminal landings. Speeds through 125 FPM can be supplied for passenger elevators.

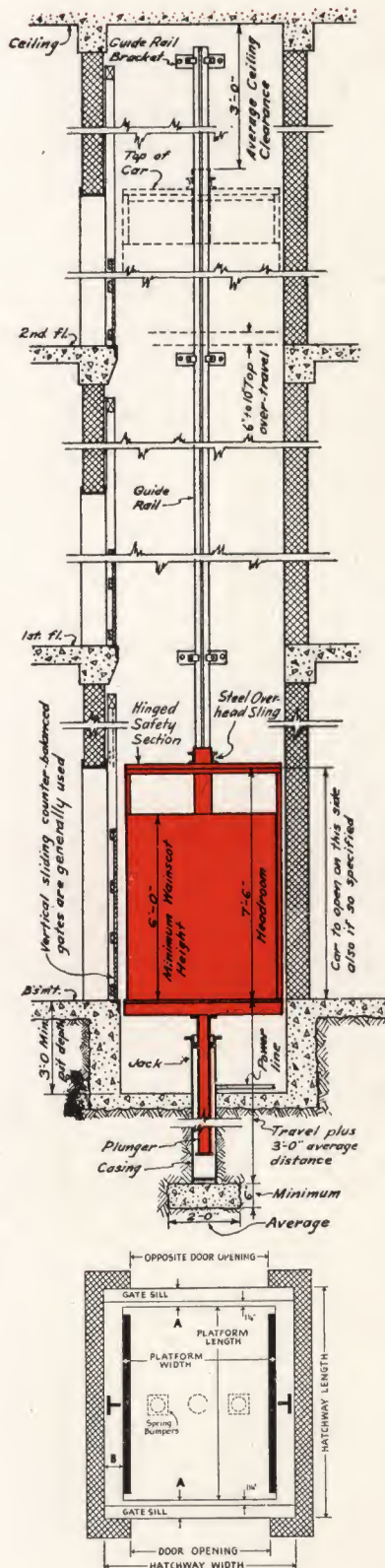
It should be remembered that it takes several seconds to open a hatchway gate, the car gate, and load the elevator car. The same applies in reverse during unloading. If it takes fifteen seconds to perform these operations, it isn't logical to pay a premium for an elevator speed that will carry the car between the terminal landings in less than fifteen seconds. For instance, a speed of 40 FPM will carry a load between floors spaced 10 ft. apart in fifteen seconds.

As Oildraulic Elevators rise under power but descend by gravity, obviously the machine cost is predicated upon "up" speed. We can supply an up speed of 40 FPM with a down speed of 60 FPM averaging 50 FPM at no more cost than for a speed of 40 FPM in both directions. Therefore, it is economical to purchase your elevator on an average speed basis.

Hatchway Doors or Gates

For average freight service the vertical rising hardwood slat gate is entirely practical from the use and cost standpoint. In certain classes of buildings fire-proof doors should be used. Full information on both types of hatchway enclosures can be secured from our local Associate Company. They are fully informed on Elevator and Building Code Requirements.

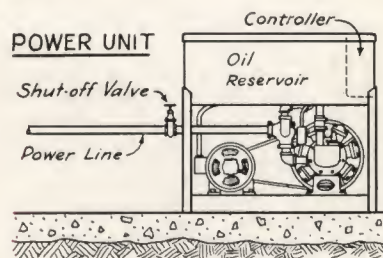
Architects' Preliminary Data



The layout dimensions and general data given on this page will be of real aid in tentatively formulating plans. Before actually incorporating the dimensions in finished plans, we suggest you secure a complete hatchway layout from us. Complete specifications will also be furnished on request.

HATCHWAY GATES—Height of door openings for freight service is usually 7'-6" For this height, or less, single blade vertical rising gates 5'-6" high require a floor-to-ceiling height of 13'-1". When this headroom is not available: (1) Gate tracks can be inclined at top to permit gate to slide up past sill at floor above (except at top landing). (2) Two blade gates can be used, requiring a minimum floor-to-ceiling height of 10'-9". (3) Horizontal sliding, butterfly or other type gates must be used.

HATCHWAY DOORS—The following dimensions apply to either manual or motorized fireproof vertical rising doors of the Bi-parting type. For a 7'-6" doorway height "regular" doors can be used if the floor-to-floor height is 11'-10" or more. If floor-to-floor height is less "Pass" type will be required.



MACHINE DIMENSIONS

(Average)

H.P.	Floor Space	Height
2-7 (Gear)	24" x 30"	44"
10-20 (Radial)	60" x 33"	55"
25-40 (Radial)	66" x 46"	60"

Allow 2'-0" clearance on all sides and top for working room.

MACHINE LOCATION—Machine can be located at any convenient spot on any landing and on any side of the hatchway where a pipe can be run. Waste space under a stairway, in a closet or basement can usually be utilized.

DOOR OPENINGS—Door opening width = platform width minus 3" (to allow for wainscoat thickness).

HATCHWAY WIDTH—

Minimum Width=2 times B plus platform width.

Dimension "B"—

(with vertical rising hatch gates or swing doors)

6½" min. for 15 lb. guide rails

9" min. for 30 lb. guide rails

(with Fireproof Bi-parting vertical rising doors)

7" when manually operated.

10" when doors are motorized.

HATCHWAY LENGTH=

A+3" plus platform length (opening one side only).

2 x A plus platform length (when opposite opening is also to be used).

Dimension "A"

(with vertical rising hatch gates)

With single or double blade gates—5½" sill+1¼"=6¾".

(with bi-parting vertical rising fireproof doors)

With regular type doors 4¾" (no sill used).

With pass type doors 6½" (no sill used).

SIDEWALK ELEVATORS—Check practicability of specifying enough rise above sidewalk level to load directly into trucks. Foregoing data applies except:

Platform Flooring should always be non-skid steel when subject to the weather.

Speed should not exceed 30 F.P.M. because sidewalk doors are raised during ascent.

Control: constant pressure push button recommended. A control station, key operated, is suggested at sidewalk level for added safety.

Pit Depth—Minimum should be 4'-0".

Rotary's coast-to-coast field organization at your service

THE MOST COMPLETE SERVICE IN THE OIL-HYDRAULIC ELEVATOR FIELD



● Rotary Sales Offices and Associate Companies

★ Executive Offices and Plant

Leading independent elevator companies throughout the United States make sales of Oildraulic Elevators and render future service on them. This national organization enables us to help solve your elevator problems intelligently, promptly and "on the ground." Each Associate Company has been chosen because of its ability to serve customers in its trade area. Each has full technical data on layouts, specifications, recommendations as to control, speed, etc.

If the classified section of your local telephone book doesn't list an Associate Company under the heading "Elevators," wire, phone or write us. Our trade name listing in the yellow classified sections reads "Oildraulic — Rotary Lift Elevators."

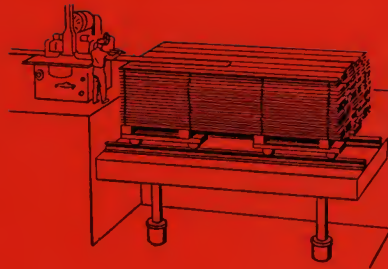
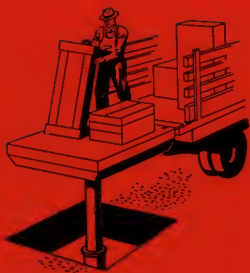
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of the thousands
of users of
Oildraulic Elevators

Airlines Terminal, New York
Allis-Chalmers Mfg. Co.
Aluminum Co. of America
American Cyanamid Co.
B. Altman & Co.
Armour & Co.
Atomic Bomb Plant
Bowes Seal-Fast Corp.
Burroughs Adding Mach. Co.
Carbide & Carbon Chemicals
Carnegie-Illinois Steel Corp.
Champion Paper & Fiber Co.
City of Seattle

Coca-Cola Bottling Co.
Curtiss-Wright Corp.
Deere & Co.
E. I. DuPont de Nemours
Eastman Kodak Co.
Eli Lilly Co.
Ford Motor Co.
General Electric Co.
General Food Stores
Goodyear Tire & Rubber Co.
Higgins Aircraft, Inc.
Johns-Manville Corp.
Liquid Carbonic Corp.

Monsanto Chemical Co.
Montgomery Ward & Co.
National Cash Register Co.
Pittsburgh Plate Glass Co.
Pratt & Whitney Aircraft
Pure Oil Co.
Revere Copper & Brass, Inc.
A. O. Smith Corp.
Standard Brands, Inc.
Underwood Elliott Fisher Co.
United Motor Service, Inc.
U. S. Government
Western Electric Co.



ROTARY LIFT CO., MEMPHIS, TENN.

Specialists in Hydraulic Elevating Devices

Rotary's coast-to-coast field organization at your service

THE MOST COMPLETE SERVICE IN THE OIL-HYDRAULIC ELEVATOR FIELD



Leading independent elevator companies throughout the United States make sales of Oilraulic Elevators and render future service on them. This national organization enables us to help solve your elevator problems intelli-

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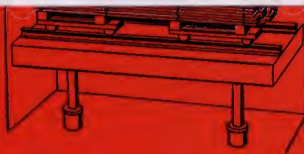
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